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NATIONAL INSTITUTE OF DENTAL RESEARCH.

HEARING

BEFORE THE

SUBCOMMITTEE ON HEALTH

OF THE

U.S. Congress, Senate.

COMMITTEE ON LABOR AND PUBLIC WELFARE.

UNITED STATES SENATE.

EIGHTY-FOURTH CONGRESS

SECOND SESSION

ON

S. 3246

A BILL TO INCREASE THE AMOUNT AUTHORIZED FOR THE ERECTION AND EQUIPMENT OF SUITABLE AND ADEQUATE BUILDINGS AND FACILITIES FOR THE USE OF THE NATIONAL INSTITUTE OF DENTAL RESEARCH

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NATIONAL INSTITUTE OF DENTAL RESEARCH

WEDNESDAY, FEBRUARY 29, 1956

UNITED STATES SENATE,
SUBCOMMITTEE ON HEALTH OF THE
COMMITTEE ON LABOR AND PUBLIC WELFARE,
Washington, D. C.

The subcommittee met, pursuant to call, at 10:10 a. m., in the Old Supreme Court Chamber, United States Capitol, Senator Lister Hill (chairman) presiding.

Present: Senators Hill (chairman), Purtell, Murray, Lehman, and McNamara.

Also present: Stewart E. McClure, staff director; William G. Reidy and Michael Bernstein, professional staff members; John Forsythe, general counsel.

Chairman HILL. The subcommittee will kindly come to order.

We have for consideration this morning Senate bill 3246, introduced by Senator Murray (for himself, Mr. Allott, Mr. Bender, Mr. Douglas, Mr. Hill, Mr. Ives, Mr. Kennedy, Mr. Lehman, Mr. McNamara, and Mr. Neely):

We are very happy to say this is a bill to increase the amount authorized for the erection and equipment of suitable and adequate buildings and facilities for the use of the National Institute of Dental Research.

S. 3246 will be made a part of the record at this point.

(S. 3246 is as follows:)

[S. 3246, 84th Cong., 2d sess.]

A BILL To increase the amount authorized for the erection and equipment of suitable and adequate buildings and facilities for the use of the National Institute of Dental Research

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section 5 of the "National Dental Research Act", approved June 24, 1948 (Public Law 755, Eightieth Congress), is amended by striking out "$2,000,000" and inserting in lieu thereof "$5,000,000".

Chairman HILL. We are very happy to have with us this morning Dr. Lowell T. Coggeshall, special assistant to the Secretary, Department of Health, Education, and Welfare.

With him is Dr. Leonard A. Scheele, Surgeon General, United States Public Health Service; and Assistant Surgeon General John W. Knutson, Chief Dental Officer, United States Public Health Service.

We are very glad to have you gentlemen with us this morning.

Dr. Coggeshall, we will be glad to have you proceed in any manner you see fit with reference to the bill before us.

STATEMENT OF LOWELL T. COGGESHALL, SPECIAL ASSISTANT TO THE SECRETARY, DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE, ACCOMPANIED BY DR. LEONARD A. SCHEELE, SURGEON GENERAL, PUBLIC HEALTH SERVICE, ASST. SURG. GEN. JOHN W. KNUTSON, CHIEF DENTAL OFFICER, UNITED STATES PUBLIC HEALTH SERVICE, AND OTHERS

Dr. COGGESHALL. Thank you, sir.

I will say for the record I have with me, also, Mr. Albert Siepert, executive officer, National Institutes of Health of the Public Health Service, who is prepared to give us any technical information in connection with S. 3246.

Also Dr. Leonard A. Scheele and Dr. John W. Knutson, and Dr. James A. Shannon are here to assist.

Since we have not had an opportunity to prepare a formal statement, I would like to present the point of view of the Department in a letter from Herold C. Hunt, Acting Secretary, Department of Health, Education, and Welfare.

It is rather short, and I will read it, if I may.

Chairman HILL. You would like to read it? We will be happy to have you do so.

Dr. COGGESHALL. This letter is in response to yours of February 22.

Hon. LISTER HILL,
Senate Labor and Public Welfare Committee,
United States Senate, Washington 25, D. C.

DEAR MR. CHAIRMAN: This letter is in response to your request of February 22, 1956, for a report on S. 3246, a bill to increase the amount authorized for the erection and equipping of suitable and adequate buildings and facilities for the use of the National Institute of Dental Research.

The bill would amend section 5 of the National Dental Research Act (Public Law 755, 80th Cong.), authorizing the appropriation of $2 million for the construction of buildings and facilities for the use of the National Institute of Dental Research by increasing the authorized appropriation from $2 million to $5 million.

If the only question relevant to S. 3246 were whether the original 1948 authorization for a dental research facility is an adequate construction estimate in the light of current building costs, this Department would interpose no objection to legislation increasing the authorization to at least $4 million.

However, the proposed bill needs to be considered in relation to a more fundamental question: that is, whether further expansion of dental research in Government laboratories should be accorded equal or greater importance as compared with efforts to strengthen the programs of dental research throughout the Nation's dental schools.

On this basic question, the Department believes there are two steps in expanding the total dental research effort which must take precedence over additional expansion of the direct research work at the Bethesda laboratories of the National Institute of Dental Research:

The essential first step is to foster the development of dental research potential in the Nation's dental schools. The 1957 budget attempts to do this by doubling the funds for grants and tripling the funds for dental manpower training through fellowship stipend.

The second step is to begin the construction of much-needed research facilities in the Nation's dental schools. The President has requested legislation that would provide $40 million over a 5-year period for construction of facilities for research and training in dentistry.

The Department's 1957 budget emphasizes a greatly expanded program in the support of research and training in the Nation's dental schools, rather than immediate expansion of direct Federal research activities.

A national program of broad research scope cannot afford to depend upon a concentration of research effort in one or, at best, a few research centers; yet, at

present, the operation of the Federal dental research laboratories receives a higher proportion of the Nation's current dental research resources than is true in any similiar broad category of medical research.

Beyond question, these Federal activities play an important role, are highly productive, and more extensive support may well be warranted in later years. What that level of future support should be can best be determined after a more balanced program of support for non-Federal research is underway.

If, however, action were to be taken now to erect (and soon to staff) additional Government laboratories for dental research, this would seriously compete with the current efforts to broaden the base of research in the dental schools.

For the reasons indicated above, we recommend that S. 3246 not be enacted by the Congress.

The Bureau of the Budget advises that it perceives no objection to the submission of this report to your Committee.

Sincerely yours,

HEROLD C. HUNT, *Acting Secretary.*

This concludes the letter, sir, signed by the Acting Secretary, Mr. Herold C. Hunt.

If I may extemporize briefly here and expand somewhat on our position, I think it is roughly this:

First, I believe there are 43 dental schools in this country.

There is an annual expenditure of something between 1 and 2 million dollars for dental research. It is the belief of the Department, which I strongly adhere to, that first things come first. I would personally like to see the research efforts in dental schools increase, by about 40 percent for the coming year, and funds have been requested for that purpose. Further, I believe there is need for the construction of additional teaching and research facilities in the dental schools, so that each school would play a greater role in producing additional investigators and research pertinent and highly necessary for the country.

Now, there is a possibility that if we get an institute building in Bethesda inasmuch as it is not connected with the dental schools—or I should say not directly connected with a dental school—its influence would be limited. It might actually serve to draw research manpower away from the dental schools, bring them to Washington and thus would not increase the research potential that is so necessary.

It is rather a matter of timing at the present time. But in broad terms, that is approximately our feeling at the present time, sir.

We will be glad to answer any questions.

Chairman HILL. You speak of the amount of time, and the fact Congress appropriated a hundred thousand dollars several years ago for the plans and blueprints for these facilities. Isn't that correct?

Dr. COGGESHALL. That is correct, sir.

Chairman HILL. In other words, we have invested a hundred thousand dollars already in these research facilities?

Dr. COGGESHALL. That is correct.

Chairman HILL. Doctor, back in January 1950, Dr. Norman H. Topping, who at the time was Assistant Director of the National Institute of Health, testified to the House Appropriations Subcommittee on the appropriations for fiscal year 1951 for the National Institute of Health as follows, and I quote:

> We need rather badly for the National Institute of Dental Research adequate space, for it is not a question of makeshift moves and separation of people, what they really need within the next 2 or 3 years is a building that will hold the National Institute of Dental Research where they can perform research that is so necessary.

Now, is it not true that the dental research is more crowded than it was when Dr. Topping testified some 6 years ago?

Dr. COGGESHALL. I believe additional space has been provided since that time, sir, in other areas, particularly the clinical center building. Is that correct, Dr. Scheele?

Dr. SCHEELE. That is correct.

Since that time space was made available in one of the separate laboratory buildings of the National Institute of Health, and also space was set aside and finished off in the Clinical Center.

Chairman HILL. In the Clinical Center did you say?

Dr. SCHEELE. That is right.

Chairman HILL. Well now, are they all together there? I mean, are they operating in separate places?

Dr. SCHEELE. Well, they are operating in separate places but no more than Cancer or Heart or any of the rest of the Institutes.

We have limited the laboratory research in the Clinical Center to that which is immediately related to the patient mission of that operation: While the purely laboratory activities of the various institutes are still in those separate buildings of Bethesda, not in the Clinical Center itself.

This is true of all of them; not only dentistry.

Dr. Shannon can tell you of the space they now have since that testimony of 1950.

Dr. SHANNON. At the present time the dental activities are largely contained or will be largely contained within two buildings; that is, building 2, which is in the process of rehabilitation, and the Clinical Center.

At the present time, in round figures, they have roughly 125 square feet per laboratory employee for this work.

Chairman HILL. You say in the process of rehabilitation. What character is it?

Dr. SHANNON. It is a laboratory building.

Chairman HILL. Well, I mean the construction of it. Is it one, what you would call more or less of a temporary building?

Dr. SHANNON. No, sir. This completes the series of moves which resulted from the readjustment of space incidental to complete occupancy of the Clinical Center, and there were series of moves that involved essentially all of the Institutes. We are attempting to regroup the laboratory facilities outside of the Clinical Center so as to service the program more effectively.

Dr. SCHEELE. If I may answer your question, too, sir——

Chairman HILL. Yes?

The buildings are the group of buildings that were started in 1937, the original Cancer Institute and some of the other buildings that were built later that were the same design.

Those, incidentally, are very fine laboratory buildings. I don't believe we could build a finer one today other than to add air-conditioning.

Chairman HILL. When was this additional space allocated to the dental institute, the institute on dental research?

Dr. SHANNON. This was approximately 2 years ago. I might point out when Dr. Topping testified—I have the assignments, the space assignments in fiscal 1952. They had a total of 6,985 square feet.

In fiscal 1956, they have around 16,698 net square feet, total. So there has been an attempt to adjust space in such a way as to get a better program.

Dr. SCHEELE. Mr. Chairman, you may recall that the dental folks didn't want to be in the Clinical Center. They preferred to have a separate building. When funds were not made available for a separate building, we did tell them that we would make every effort to provide them space in the Clinical Center, because we felt this was worth doing and would put them in contact with other research that had a bearing on the oral cavity. Within the limits of our ability I think you can see from the 16,000 square foot figure here we have tried to deal as generously as we could with that program, within the limits of this broad philosophical view that we have of our future mission in the Health Service. This is that we shouldn't continue to make our own direct research grow bigger and bigger but should increase our research outside, so that we not only have one big research center in Washington, run by the Government, but have tremendous centers elsewhere around the country, so that we have a national effort.

There has been some criticism of the size of the National Institutes of Health own laboratories as you probably know. Some people feel the Government's direct research work is getting too large a proportion of the total number of dollars spent for research, and our whole budget this year for the NIH was predicated on the concept that we would make our big push for assistance outside and for training more research workers who would work outside.

That is why we increased our request for grants overall 47 percent; the Dental Institute 90 percent. That is why we asked for only an increase of 8 percent for the direct operations of the Public Health Service in Bethesda, and that, essentially, to fill out the plan of gradual staffing and operation of the Clinical Center.

But our broad concept has been that we don't want to grow and grow ourselves. We want others to grow, because we think this to be in the best national interest.

Chairman HILL. Dr. Coggeshall, let me ask you this question: How does a dentist's academic training compare with that of a physician?

Dr. COGGESHALL. I would say the initial training of a dentist is pretty much the same as a physician. It should be, and I think most schools attempt to give a very well-balanced program in the basic sciences. I am not familiar with the curriculum enough to go into great detail. Actually, a great deal of the instruction in the first 2 years of dentistry is done by the medical school faculty.

Then, the last 2 years is done by a dental faculty.

So I would say at least the training in my mind is very similar in the first 2 years to that of a physician and should be.

I would like to add one point, Senator Hill, in connection with the thought of your question. That is, by interposing an objection to this building at the present time, I would in no way or in any sense like to have the Committee conclude that we feel that there is enough dental research. I think everything should be done that is possible to extend it because it is highly needed.

I believe the real bottleneck is in the number of young men that are going into dental research. We have the same problem in medicine. I think we can fulfill that need best by giving aid to the dental schools to provide additional opportunities and inducements for young men to go into dental research.

Chairman HILL. You think, then, that we ought to go forward with research in dentistry just as we are in medicine, and I am sure you

also agree that a doctor of dentistry is a professional man just as is a doctor of medicine. He is entitled to the same public respect and recognition and the same opportunity to be of service that we grant to the doctor of medicine; is that correct?

Dr. COGGESHALL. I certainly do, without any qualification, and particularly in connection with research.

I think everything we can do to increase the research potential in dentistry should be done. I believe it has lagged in the past few years.

I think as far as professional respect is concerned, dentists certainly deserve it, and their performance indicates that they deserve it.

Chairman HILL. Dr. Knutson, would you answer this question:

Down at the University of Alabama Dental School, the school and crippled children's agency there—we have a fine crippled children's hospital there that is associated with the medical schools all there in the same medical center—are all working together in a series of projects designed to make corrective treatment of cleft palate in children available throughout the State of Alabama.

As you know, that is a pretty costly and long-drawn-out treatment. Could you tell us just what is being done here at the Institute to find the cause and ways of preventing the cleft palate?

Dr. KNUTSON. At the present time, our studies on cleft lip and palate, the most common of all developmental defects, occurring about once in every 800 live births, are largely confined to the growth and development features of this problem. That is, the muscular development and the manner in which the cleft or deformity affects normal muscular function.

The attempt here is directed first toward the practical end of determining when the surgery would be most effective, and when a restoration or prosthetic device should be used, and so on.

However, there are studies going on, not at the Institute, which are concerned with the basic cause of this condition, and some progress has been made in this area. It has been determined, for instance, that with dogs this condition can be created by severely restricting the vitamin B content of the diet.

Chairman HILL. How many people do you have at the Dental Research Institute today working on this problem?

Dr. KNUTSON. It is a problem in which several people are concerned with studying the condition, as a team. Not more than three, however, are members of this team at the present time.

Chairman HILL. Well now, do you have people in the Institute also working on dental conditions in relation to rheumatic heart disease and cancer of the tongue, the mouth, and patients with sinus condition or loss of hearing?

Dr. KNUTSON. Yes; again to a fairly limited extent. But the dental research workers and other research workers assigned to the Clinical Center at the present time work in close relationship with the physicians in studying the patients which come there for treatment both in the area of rheumatic heart disease and in the area of cancer which you mentioned.

Chairman HILL. Well, do you believe this work largely was the medical doctor's rather than in your own Dental Institute?

Dr. KNUTSON. I would want to say, or make it clear that insofar as can be determined from contact with the individuals working out

there, that the working relationship is entirely a satisfactory one, and there isn't any complaint, certainly, on that situation.

Chairman HILL. Thank you.

Dr. SCHEELE. I believe you have one physician on the staff at the Dental Research Institute, do you not?

Dr. KNUTSON. Yes, sir.

Dr. SCHEELE. And the patients being studied who have rheumatic fever and other things there can be available to the dental investigators who want to work with them. But there is a physician in there also looking at these broad problems.

Dr. COGGESHALL. May I add something to that?

Chairman HILL. Yes.

Dr. COGGESHALL. At the university with which I was associated before I came to the Government, we had a dental research program at our medical school; although we do not have a dental school, we spend from university funds approximately $110,000 to $120,000 yearly on dental research.

Now, I am sure it is the feeling that there is great need to interpose and intermingle the dentists with the physicians and bring them closer together so there can be a cross-fertilization of ideas, because the knowledge that comes from biochemistry, pharmacology, or bacteriology is no different as it applies to the dentists and physicians.

I know that I would interpose a great objection to their isolation in a separate building across the campus.

I think there is great merit in having dental research people directly connected with the people that are sick, particularly for their research activities.

Chairman HILL. Dr. Knutson, could you provide us with the record of the average number of auxiliary laboratory personnel, that is, junior scientists and technicians for each of the seven institutes? Not a continual setup, but just the seven institutes we have.

Dr. KNUTSON. I shall be glad to do that.

Chairman HILL. Can you get that for us?

Dr. KNUTSON. Yes; I will be glad to.

(The requested material follows:)

NIH research staff—fiscal year 1956 (budgeted positions), ratios of supporting staff to research investigators

Institute	Number of supporting staff [1] for each senior [3] research investigator	Number of supporting staff [2] for each junior [4] and senior research investigator
Cancer	3.6	1.7
Mental	1.8	1.2
Heart	3.9	1.9
Dental	1.8	1.1
Arthritis	2.2	1.2
Allergy	3.8	2.3
Neurology	2.5	1.2
Total	2.9	1.6

[1] "Supporting staff" includes all junior scientists (GS-9 or commissioned officer equivalent) plus all technicians, animal caretakers, clerks, and others.

[2] "Supporting staff" includes the same personnel as footnote 1, excluding junior scientists.

[3] Senior research investigator: Professional staff—civil service grades GS-11 and above and commissioned officer equivalent.

[4] Junior research investigator: Professional staff—civil service grade GS-9 and commissioned officer equivalent.

Chairman HILL. Doctor Coggeshall, you recall at the last session of Congress this committee reported out Senate bill 849, and the Senate passed the bill unanimously?

Dr. COGGESHALL. Yes, sir.

Chairman HILL. I take it you support the purposes of that bill?

Dr. COGGESHALL. I certainly support the purposes of that bill; yes sir. It should have been broader, I think, if I may say so. But the basic purposes I have no quarrel with whatsoever.

Chairman HILL. When you say broader, do you mean to take in medical information?

Dr. COGGESHALL. No, sir. If I recall it correctly, it is the one that provides for catastrophic diseases—is that correct—$30 million a year for 3 years.

Chairman HILL. $90 million all together; $30 million for a 3-year period but not limited to catastrophic diseases.

Dr. COGGESHALL. I recall it was limited only to such crippling diseases as cancer and heart, and so forth.

Chairman HILL. Those diseases set out in the bill "and other diseases," which is a blanket clause, which includes any disease from which a man might suffer.

Dr. COGGESHALL. I am afraid I concentrated my attention on the first diseases, and my comment that it was a little too restricted was based on the assumption that it did not include some of these other diseases that we do not hear so much about but which are equally important.

Chairman HILL. No; I think I can assure you that it covers all of the diseases. We did set out some of the best-known and catastrophic diseases. But we put in the blanket words "and other diseases," which means any and all diseases from which man suffers.

Dr. COGGESHALL. I think it is a very good bill, sir. I do believe one other thing, that there should have been teaching along with the research needs, particularly at the higher levels, both for dentistry and medicine; the teacher and researcher are so intermingled, it is difficult to separate them.

Chairman HILL. You recall, too, that we had a separate bill which provided for the facilities for the medical schools and facilities for teaching?

Dr. COGGESHALL. Yes, sir.

Chairman HILL. What we might call a companion bill to the research bill?

Dr. COGGESHALL. Yes, sir.

Chairman HILL. Senator Murray, any questions?

Senator MURRAY. No, Mr. Chairman.

Chairman HILL. Senator Lehman.

Senator LEHMAN. Yes. I want to ask him a few questions.

In this letter you read, you stated in part at least, "The operation of the Federal dental research laboratories receives a higher proportion of the Nation's current dental-research resources than is true in any similar broad category of medical research."

Have you any figures to prove that? Because you have given a rather insignificant amount.

Dr. COGGESHALL. Yes, sir.

Senator LEHMAN. Will you talk louder, please?

Dr. COGGESHALL. The budget for research grants this year goes from some $430,000 to $800,000 this year. So, percentagewise——

Senator LEHMAN. I am sorry; I didn't get the figures.

Dr. COGGESHALL. $430,000 is the current budget, and the proposed increase is up to $800,000.

Now, for a program of fellowships and training for dental investigators, I believe the current level is $100,000. We have recommended for the forthcoming year that that go up to $300,000 for the various dental schools. I believe those figures are correct, sir.

Senator LEHMAN. Then it goes on to recite further:

> If, however, action were to be taken now to erect (and soon to staff) additional Government laboratories for dental research, this would seriously compete with the current efforts to broaden the base of research in the dental schools.

Now, I feel we should encourage medical and dental schools in every possible way, and I think that is the feeling of most of the members of this committee.

I also have a great admiration and confidence in what was done by the Institute.

Now, if that statement is correct, then it would compete with the current efforts to broaden the research of dental schools. Why wouldn't it be true in other research—heart and cancer research—which kind of research is carried on, of course, by a great many medical schools and by a great many hospitals throughout the country?

Yet, I don't think the competition of the Health Institutes in those particular fields of medical science has been great.

Why wouldn't that hold good with regard to all research?

Dr. COGGESHALL. If I may, I will answer that, and ask some of my colleagues to amplify on your question, which is a very important one.

To imply a resentment I think is not quite the case. I think the current situation is this: That in the some 83 medical schools and several independent institutions, specifically speaking about cancer, such as the Memorial Hospital in New York, there's a very widespread cancer research program already in effect.

Now, the comment here about broadening the scope of a dental-research program, speaking about competition, it is my belief, and I believe it can be substantiated, that the first step is to increase the activities in the dental schools themselves, because there is where we would have to turn for the additional investigators to staff the Institute here.

Now, if we get a large institute, if we assume—and I believe it to be true—that there are not enough investigators—that we should increase their number; this would limit the scope of the activity by draining away from some of the dental schools some of the better talent, where actually they should remain in the school, not only for the sake of their own work and research, but they would be in better position to train a larger number of younger men that we should have coming along for dental research.

I might ask Dr. Shannon to amplify the remarks.

Dr. SHANNON. I would like to give you some figures. The figures I will give you will be in very round numbers.

Medical research in this country is supported totally to the extent of approximately $240 million a year.

The total medical research activity of NIH, including all activities, is in the order of $30 million. In other words, there is concentrated in Bethesda roughly one-eighth of the overall medical research activity.

We have tried to find out comparable figures for dental research itself. One figure that is representative of dental research supported by granting agencies across the country is calculated by the Biosciences Exchange of the Smithsonian Institution. This comes to a total of $925,000 in grant support. The figure does not include university or industrial funds spent directly on dental research. On the other hand, the activity of Bethesda in the Dental Institute, leaving aside such things as administration, comes to $792,000.

So that we have, as best we can calculate it now, an undue concentration of dental research in Bethesda.

We feel that were we at this time to expand the Bethesda work rapidly as opposed to expanding it rapidly in the universities, where, in the final analysis, will be our prime source of new talent, this might not be the most logical way to review an expansion.

I would point out that the figures themselves are indicative of the need of a very marked increase in dental research in this country, and any marked increase, if proportionately large as it should be, should be done in a very orderly manner.

Senator LEHMAN. I am all for every step to encourage the research work provided by medical schools and by the hospitals, both in regard to dental care and the treatment of dental diseases, and also with regard to basic research.

But I feel at the same time that we ought to do everything possible to encourage research by the Government at the Institutes. They have shown their value and effectiveness.

Now, as I understand it—and I am reading now from a statement which has been prepared by Dr. Roy Doty, from Chicago, Ill.—I do not believe that this has yet been submitted, but I have it in my folder here. I have not read the whole report, but one paragraph which reads as follows:

> The National Institute of Dental Research has a mandate from Congress to conduct investigations in two areas—basic research and clinical research.
>
> Unless plans are executed now for constructing adequate facilities for the Dental Institute, its basic research program cannot attain the effectiveness envisioned by the Congress.
>
> There would be a correspondingly lower effectiveness of the clinical research activities which must of necessity be correlated closely with the fundamental research areas.

Now, there is testimony of a representative of the dental association itself, who points out that the facilities that are offered at the Health Institutes are inadequate to discharge the duties imposed on the Health Institutes by the Congress.

Now I go on further and read from a statement of Dr. Harry Lyons, of Richmond, Va., who is, I understand, the president of the American Dental Association. Again I will point out I have not read the statement in full but only a very short paragraph which bears relationship to the matter we are discussing.

He writes:

> Nearly 8 years ago Congress authorized a $2 million appropriation for the Dental Institute Building. The plans for the building were completed in 1950 at a cost of nearly $100,000. Nothing further has been done on the building project.

Is that correct?

Dr. COGGESHALL. That is correct, sir.

Senator LEHMAN. I can't quote your statement, but I can see that a large program for dental research is not being undertaken by the Health Institute.

I would think, even with the completion of this building, which now only carries out the mandate of Congress which was adopted 8 years ago, would not constitute a very great operation in relation to the size of the problem and the urgency of the problem.

Dr. COGGESHALL. May I say one thing, Senator Lehman. At this time, I think most of the objectives pointed out can be realized by making grants to the dental schools themselves, where we accomplish two purposes.

First, we increase the research, the necessary research, and at the same time improve the training of young dental investigators. So that I would say that the timing is the important thing. If we increased our activities here out of proportion to what we are doing in the dental schools, we run a serious danger of hurting the dental program.

For example, at the present time we are spending, for fiscal year 1956, $800,000 at NIH, in the Institutes' own laboratories, whereas our grant support of research on the outside is only half that amount—$400,000.

I believe that we will get greater dividends if we support the dental schools first and then later get the Institute.

So it is a matter of timing.

Senator LEHMAN. I am in favor of the grants suggested for needed research facilities and the Nation's medical schools, including the dental schools. But I do not think that is in competition at all with the plan of making possible the equally urgent and important research work of the Institutes.

Dr. COGGESHALL. I wouldn't want to be placed in the position, Senator Lehman, of saying that it is totally bad, to create this Institute. I think the greater dividends would come if we would not have the Institute of Dental Research building now, because of the serious danger of draining off talent by bringing it into the Institute at this time.

Certainly, I believe that there may be merit in having an Institute building at the NIH at some time.

But I think first things come first, and we do lack a strong research program in dentistry.

One of the surveys made by the National Institutes of Health; I believe it was published in 1950—and I quote from that—reveals that only $733,000 was spent in 1950 for separately budgeted dental research, in all of the United States—an insignificant amount, in my opinion.

The need is for staff in the dental schools, additions to staff, to improve the quality of instruction and to allow for more research in the dental schools.

So again may I say that I don't want to be placed in the position of saying that a larger dental institute would be bad at Bethesda. I think it would be in the best interest of our country if we strengthened the research program in the dental schools first.

Chairman HILL. Any questions, Senator Purtell?

Senator PURTELL. I regret very much that I wasn't here, Mr. Chairman, and witnesses, to listen to the testimony from the beginning this morning. But we do have conflicts in meeting dates, so we have to choose which one we must go to, and then try to get out as quickly as we can in order to make other committee meetings.

I would like to make clear what your letter indicates—the letter written to the chairman.

Your attitude, and the attitude of the Department, as a matter of fact, is not in opposition to this type of construction at all. But we have heard for weeks and weeks, not only this year, but previous years, the need for training, the need for getting more people into these fields before we can expand other programs.

In other words, the initial need is for more knowledge in this field.

We have pending now with our committee a 40 million 5-year program for teaching and research in dentistry.

I would like to make it clear that you are not opposing S. 3246 because you are opposed to the building at this time. You feel that the first step must be to get more trained people available in the field and do more research in those areas and also back here at NIH. Is that correct?

Dr. COGGESHALL. That is correct.

Chairman HILL. Doctor Coggeshall, thank you very much.

Dr. COGGESHALL. Thank you very much.

Chairman HILL. Senator Murray, I will ask you to make any statement you wish, and present our next witness.

Senator MURRAY. Mr. Chairman, it gives me great pleasure to introduce to the committee an oldtime friend of mine, Dr. C. Willard Camalier.

Dr. Camalier, who is currently serving as assistant secretary of the American Dental Association and who has been both president of the District of Columbia Dental Society and president of the American Dental Association, is no stranger to Members of the Senate.

Throughout the years since his graduation from George Washington University, Dr. Camalier has been of inestimable help to those of us in the Congress who have concerned themselves with efforts to improve the health of the Nation.

At all times and under all circumstances Dr. Camalier has proved himself most cooperative, and the advice he has given us in connection with the dental health of the Nation has always been sound and objective.

We are today to consider the bill S. 3246, which aims at bringing to fulfillment the expressed desire of the Congress to properly house the National Institute of Dental Research.

I can think of no one better able to advise the committee in connection with this legislation than Dr. Camalier. More than any one individual he is responsible for bringing the National Institute of Dental Research into being. He has closely watched its development ever since. He will, I know, give us testimony which will be enlightening and constructive.

Mr. Chairman, I present Dr. C. Willard Camalier.

Chairman HILL. We are glad to have you here, Doctor. We will be happy to have you proceed in your own way.

Dr. CAMALIER. Thank you, Senator Murray, for that very fine introduction.

Chairman Hill. Excuse me, Doctor; before you start your testimony: We are glad to have the distinguished Senator from Virginia with us—Senator Robertson. I believe Senator Robertson has another committee meeting.

So, if you will yield, Dr. Camalier, we will have Dr. Robertson make a statement and present a witness. Then we will go ahead with yours.

You keep your seat, Dr. Camalier. After Senator Robertson's testimony we will have your testimony.

STATEMENT OF HON. WILLIS A. ROBERTSON, UNITED STATES SENATOR FROM THE STATE OF VIRGINIA

Senator Robertson. Distinguished members of the Senate committee, according to the records of Richmond and Washington-Lee University, I am some kind of a doctor, but I assume I am somewhat like the one the president of Roanoke College was during the great shortage of doctors, when a woman came in one night and asked the maid, "Is Dr. Smith at home?"

And she said, "No, he isn't."

She said, "I have just got to see the doctor. My baby is very sick, and I have just got to see the doctor."

And the colored girl said, "Lady, I will have to tell you, Dr. Smith is the kind of doctor that don't do you no good." [Laughter.]

Senator Robertson. I have been introduced as Senator Robertson, but I am still known in the mountains of Virginia as Major Robertson; and that is one of the few titles that is not an honorary title, so far as I know. I really prefer it to colonel, because I remember the New Yorker in Texas who said to the colored boy, "How do you get so many colonels down here?"

He said, "Boss, some of them go to the war and fights and they get to be a colonel. Some of them supports the governor and he makes them a colonel; and some of them just gives the Negro like me a dollar."

Before I introduce a distinguished man that I have been privileged to know since he was a small boy in short pants—and in those days small boys wore short pants instead of long pants—I want to make a little reference to the school where he is serving so brilliantly.

I was elected to the State senate in 1915. Prior to that, my youngest brother, John Churchill Robertson, had been to VMI and then he wanted to be a doctor, and I recommended that he go to the Medical College of Virginia, and he did; and he graduated from there; and he developed in later years a very large and lucrative practice in the city of Roanoke and in Salem, where my father and mother lived, and adjoining areas.

He is 10 years younger than I am but unfortunately, 2 years ago he had a severe coronary attack.

Regardless of whether others are as good or not after a coronary attack, he knew he was not. So, he retired from the practice of medicine. I hope he will live a long time, but the fact remains he has retired from all professional operations.

Then I had a very fine former friend, who as a boy wanted to be a doctor and he didn't have money enough to go to medical school, and I was then in the State senate, and I arranged through the officers of the Medical College of Virginia to give him a scholarship. That

man was Dr. Frank Leach. He came back to Lexington and developed into the very best abdominal surgeon that I have ever known. He performed hundreds of operations, appendectomy I believe you call it, and he never lost a patient. He, last summer, had a coronary attack.

In 1920 there was a bill introduced in the general assembly to abolish the Medical College of Virginia and move it up to Charlottesville and make it a part of the fine medical school of the University of Virginia.

They had a small hospital at Charlottesville and the people from my valley area, only 75 miles from Charlottesville, went to that hospital, and tremendous pressure was brought to abolish the Medical College of Virginia and move it to Charlottesville.

Of course the University of Virginia had a tremendous prestige in Virginia, and they had many alumni serving in the legislature and they turned out some very great doctors.

But I thought that it would not be wise to take the school from our capital city and the opportunities there of operating in hospitals where the young doctors could get adequate internship training and move it up to Charlottesville, so I voted against that and the proposal to move the hospital and that school was defeated.

Subsequent events have proven that even with two great medical schools—one in Richmond and one at Charlottesville—we still don't have adequate facilities to train the doctors that we need in Virginia and for the medical services in the South generally.

They are both now great medical schools, and you will have the privilege of hearing this morning in behalf of a bill that has been pending here for 8 years, to do something worthwhile in research in dentistry, one of the outstanding dentists of the Nation, dean of the School of Dentistry of the Medical College of Virginia, and president-elect of the American Dental Association.

It has been my privilege, as I say, to know this doctor since he wore short pants. I got my law degree in 1908, and sometimes it is not advisable for a man of my age to be too specific as to how old he was, but it was in the Congressional Record some years ago, and there is no use for me to try to cover it up, and the distinguished Senator from Montana never has apologized to anybody for his youthfulness and why should I, so I will admit that I started practicing along in 1908.

At that time our tailor in Lexington, the county seat of Rockbridge, was a "Mr. Judge."

Dr. Lyons, on one occasion while I was living in Buena Vista, went to Lexington to try on a suit with me, and he brought his little son Harry. Now that little son Harry—a brilliant man—went to Washington-Lee to premed; then graduated from the Medical College of Virginia, and is now one of the outstanding doctors of Virginia and of the Nation.

I am proud, therefore, to be privileged to present a man I have known all of his life and a man who has accomplished so much in the field of training dentists and in the field of dental research.

And, as your distinguished chairman knows, through our service together on the Appropriations Committee, I always have taken a great interest in research for heart, and mental and dental researches.

We have not gone forward in dentistry, however, on the scale that

we have with the others. So, in addition to presenting a witness, I also want to endorse the pending proposal, that we go ahead and build an adequate research center.

Mr. Chairman, it gives me pleasure to present my friend and a distinguished gentleman, Dr. Harry Lyons.

Chairman HILL. Have a seat, Doctor, will you.

And, Senator Robertson, we want to thank you for coming and being with us, but for your most timely remarks.

Having served with you on the Senate Appropriations Committee, I certainly can testify as to your great interest in these research programs and as to how you always support these research programs.

Senator ROBERTSON. I appreciate that. My heart is in this. Right in my own family, a doctor—a younger brother—none of us had ever been sick, but he, the youngest one, gets cut down with heart trouble, and I know we need to do something about it. I know we need to do something about cancer.

When I see these fine boys who want to go to the Naval Academy being thrown out because of tooth defects that could in early age have been cared for, it does not seem right. We can certainly do something. You give us the authorization, and you have my vote on the appropriation.

Chairman HILL. Thank you. That is the strongest statement you could have made, Senator.

Doctor Camalier, we will be glad to have you proceed, sir, in your own way.

STATEMENT OF DR. C. WILLARD CAMALIER, ASSISTANT SECRETARY AND PAST PRESIDENT, AMERICAN DENTAL ASSOCIATION

Doctor CAMALIER. Senator Hill, I want to thank Senator Murray from Montana for the very fine introduction. We have worked consistently together on this research problem, and I think that eventually we will get somewhere. Incidentally, he has been a fine friend of dentistry for many years.

Before I start, however, I would like to ask Doctor Dean, the former Director of the Dental Institute, and Secretary of the Council onDental Research, to be with us, and Doctor Doty, the secretary of the Council on Dental Therapeutics.

Chairman HILL. We are glad to have you gentlemen here with us.

Dr. CAMALIER. And Mr. Conway, the secretary of the council on legislation.

Gentlemen, the American Dental Association appreciates this opportunity to appear before you this morning and to urge the adoption of S. 3246.

We feel that this matter has been delayed entirely too long. The authorization, as you know from the former witnesses, was enacted in 1948. Since that time, practically nothing has been done. This has not been attributable to the inactivity of the American Dental Association, but to the fact that the governmental department will not approve a suitable building.

I have found in dentistry, in my practice of 35 years, that everything we get we have to fight for. Now, this is an American dental institute,

and we urge it for the American people—the children and adults of this Nation. We can't for the life of us understand why it is that these governmental agencies drag their feet on so important a matter.

The association is exceedingly desirous that it be promulgated; that the legislation be enacted promptly. In 1959 we will have been in existence as an organization for 100 years. At that time or sooner we would like this building dedicated.

Now, all of this talk about postponing it and putting the money in dental schools is from my viewpoint simply another unjustified delaying action. In very plain language, and without fanfare, I would like to repeat emphatically that this building should be erected now because we know it is going to be for the good of the American people.

Mr. Chairman, I am not supposed to carry the brunt of the testimony, because we have some experts here for that purpose. So I am going to ask Dr Lyons to take the chair and present the first testimony for the association.

Chairman HILL. We will be glad to have you proceed, Dr. Lyons.

STATEMENT OF DR. HARRY LYONS, PRESIDENT-ELECT, AMERICAN DENTAL ASSOCIATION, AND DEAN OF SCHOOL OF DENTISTRY, MEDICAL COLLEGE OF VIRGINIA

Dr. LYONS. Mr. Chairman and members of the committee, I am Harry Lyons of Richmond, Va., president-elect of the American Dental Association.

I am dean of the School of Dentistry of the Medical College of Virginia and am presently serving on the National Advisory Dental Research Council for the National Institute of Dental Research.

I am here today to urge enactment of S. 3246 so that the way will be cleared for construction of the National Institute of Dental Research building.

With me are Dr. J. Roy Doty, secretary of the association's council on dental therapeutics; Dr. H. Trendley Dean, secretary of the association's council on dental research, and Mr. Bernard J. Conway, secretary of the association's council on legislation. All three are staff members of the association's central office in Chicago, Ill.

We also have with us a distinguished dental educator and dental researcher from the good State of Alabama, Dean Joseph F. Volker, dean of the School of Dentistry of the great University of Alabama; and he is here as the representative of the American section of the International Association for Dental Research.

Chairman HILL. Let me interrupt you there, and say we are glad to have Dr. Volker here with us, and I am particularly glad to have him because I know him and know of what fine work he is doing there in Alabama.

Doctor, won't you pull a chair around and join us?

Dr. LYONS. Senator, may I interrupt this testimony just another moment to present Mrs. Charles D. Center, who is the assistant director of public health education, Department of Public Health of the State of Georgia. Mrs. Charles D. Center.

Chairman HILL. We are happy to have Mrs. Center here. She has been with us before and has always been a helpful witness. She has always been very fine. We are glad to have her here with us this morning.

Dr. Lyons. Thank you, sir.

The legislation, S. 3246, which is the subject of this hearing, is a simple amendment to section 5 of the National Dental Research Act, Public Law 755, 80th Congress. It would increase from $2 million to $5 million the amount authorized for the construction of a building to house the National Institute of Dental Research.

Nearly 8 years ago Congress authorized a $2 million appropriation for the Dental Institute Building. The plans for the building were completed in 1950 at a cost of nearly $100,000. Nothing further has been done on the building project.

The association's recommendation: The amount remaining under the existing authorization, $1,900,000, would not be sufficient to construct the Dental Institute Building today The association has been informed that the building and equipment specified for in the present plans would cost almost double the $2 million authorized in 1948, should construction begin in fiscal year 1957. In order to assure that the authorization will be adequate, the American Dental Association urges that the amount be increased to $5 million as proposed in S. 3246.

History of building plans: In enacting the National Dental Research Act of 1948, Congress declared its intention that the National Institute of Dental Research should have a separate building to house its activities.

In 1949, the Public Health Service made plans to initiate the building construction. The Bureau of the Budget, however, did not allow a requested appropriation for $400,000 in cash and $1,500,000 for contract authorization in the fiscal year 1950 budget.

On the recommendation of the American Dental Association, the Senate approved a full cash appropriation of $2 million. The fiscal 1950 appropriation bill as enacted, however, provided only for an expenditure of $100,000 for the development of plans and specifications for the Dental Institute Building.

During the budget hearings for fiscal year 1951, Dr. Norman H. Topping, then Assistant Director of the National Institutes of Health, gave the following information to the House of Representative's Subcommittee on Appropriations for the Department of Labor and the Federal Security Agency. I am now quoting Dr. Topping:

* * * I feel and Dr. Dyer feels that we need rather badly for the National Institute of Dental Research adequate space that is permanent, where it is not a question of makeshift moves and separation of the people; that they really need within the next 2 or 3 years a building that will be the permanent home for the National Institute of Dental Research * * *.

During the same hearings, Dr. Topping made the following statement:

* * * like the other construction programs in research facilities, we have felt that basic laboratory research plus clinical research makes the total picture. Unless we have a building for dental research we will have to curtail some of the plans we have made over the past 4 years.

Chairman Hill. Doctor, excuse me one moment. Reference has been made to Dr. Dyer by Dr. Topping.

As I recall, Dr. Dyer was head of the National Institute of Dental Research.

Dr. Dean. No, sir; he was head of all the National Institutes of Health at that time, Senator.

Chairman HILL. You were here at that time, were you not?

Dr. DEAN. Yes, sir.

Chairman HILL. And Dr. Dyer was head of all the Institutes?

Dr. DEAN. That is correct, sir.

Chairman HILL. Thank you, sir.

Dr. LYONS. It was evidently Dr. Topping's position, and the position of the Public Health Service, that the Bureau of the Budget did not appreciate the necessity for developing the basic research program of the National Institute of Dental Research.

The Bureau of the Budget had disapproved the agency's request for the Dental Institute Building appropriation on the ground that space could be made available in the Clinical Center for the dental research program.

During the hearings before the Senate Subcommittee on Appropriations for the Federal Security Agency, the Public Health Service representative again stressed the need for a separate building for the Dental Institute.

Shortly after the fiscal year 1951 budget hearings, the Korean war began, and, of necessity, the plans for constructing the Dental Institute Building had to be postponed. That postponement has proved most costly not only in terms of monetary expenditure, but, more importantly, in terms of the serious delay it has imposed on this Nation's progress toward the effective control and prevention of dental disease.

Dimensions of the dental health problem: The dental profession in the United States has achieved world leadership, yet the ravages of dental disease are of tremendous proportions in this country.

Almost all persons suffer from oral disease at some time during their lives.

Dental caries, tooth decay, is the most prevalent of all the diseases not only in the United States but in the world.

Now I should like to digress from this prepared statement for just a moment to indicate to this committee something of the nature of tooth decay.

I feel that too many people—not only lay people but professional people as well in other areas of health—hold to the simple point of view—it is an uncritical point of view, an unlearned point of view—that dental caries is characterized by holes in the teeth which may interfere with dental function, and which sometimes leads to dental pain, but that is about all.

The story needs to be told at this point, I believe, in a different light.

Dental caries is itself an infectious disease. That should be borne in mind, and it has very important—tremendously important—relations to dental health.

At a staff meeting of professional people at the Mayo Clinic in 1925 the late Dr. Charles Mayo made the statement that the next great advance in the prevention of the chronic infectious and degenerative diseases would have to be made by the dentist. Now, that statement is as true today as it was when Dr. Mayo made that statement in 1925, despite the fact that we have antibiotics and other great advances in medical care. As you may know, the antibiotics are very useful in the treatment of a cut. They do nothing for the chronic ones, or very little for them. The chronic degenerative diseases hold possible just as much of a problem today as they did in 1925.

Now, what Dr. Mayo had in mind was simply this: For infectious processes to invade the body there must be provided for the bacteria portals of entry. A few bacteria have the power of creating their own portals of entry—the organism of diphtheria is such an example. In most instances, they have to have some other agent or some other cause create a portal of entry into the body.

A portal of entry within the body is a break in the body's continuity, a cut, a scratch, a stab wound, an ulcer on the tonsil, or a carious cavity in the tooth may provide such a portal of entry.

Now, with 95 percent of all persons in the United States suffering dental caries at one time or another, we have here a most rampant disease that provides portals of entry into our bodies for infectious processes beyond the dental field.

Reference has already been made here today to heart disease. Dental disease bears a relationship to several of the heart diseases of which there are, incidentally, many. For one example, in rheumatic heart disease—which is a killer of persons at all ages—a certain type of organism may be recovered from the bloodstream. A morphologically identical organism may be recovered from the roots of abscessed teeth, caused by dental caries.

That is just one of many of examples that may be cited to indicate the important relationships between cavities in teeth created by dental decay and general health problems.

I might also point out in another category that 75 percent of those who lose their teeth lose them because of another category of dental disease, the so-called gum diseases, known to laymen as pyorrhea and gingivitis.

Further indicating the scope of our problem, 25 percent of our children suffers from severe deforming irregularities of teeth.

One child out of every 800 born alive suffers from horrible, crippling deformities known as cleft palate and harelip, which have tremendous social implications aside from any other important considerations.

Twenty-five percent of the population above 15 years of age is wearing 1 or 2 full dentures as a result of previous dental disease.

If this picture is seen in total, no one can deny that it portrays an appalling drain on the national health.

In terms of cost to the Nation, the problem is of equally great proportions. The Nation's yearly civilian dental bill is $1½ billion, almost 13 percent of the national expenditure for all private health services.

The Federal Government spends many millions more for the dental health care of its beneficiaries. The Department of Defense, for example, spends about $100 million annually for the dental health care of military personnel and uses the services of nearly 6,000 dentists in the Armed Forces. In spite of those very large outlays, less than one-half of the population receives adequate dental care, or any dental care at all, in fact.

It is simply not reasonable to say that this pattern of dental disease and cost should continue without effective intervention by the only available weapon—dental research.

The dental diseases are not dramatized daily and continuously in a manner comparable to cancer, heart disease, arthritis, and the crippling disorders of children. Nevertheless, they account for a tremendous toll

in human suffering and depreciation of health status, and even bear important relationships to the ability of thousands of persons to gain employment.

AREAS FOR EXPANDED RESEARCH

Here are just a few of the dental problems on which there are critical needs for dental research and because of which I am asking for your support in connection with an adequate facility for the NIDR. These are problems for which we are seeking the broad effective type of research possible only through the medium of such a facility:

1. Cleft palate and harelip developmental defects, afflicting 1 out of every 800 live births in this country.

While there are many treatment programs being developed for these horribly crippled children, very little has yet been done to establish the causes and thereby to work out a preventive program in this area of human affliction. We need the requested building, in part, for the study of this problem.

2. "Crooked teeth" and associated facial deformities. Here, again, we have some corrective or remedial programs but little has been done toward a preventive solution of a problem which has a relationship to nutrition, gastric disorders, personal esthetic, mental well-being, and other health conditions. We need the requested building, in part, for an exhaustive study of this problem.

3. Tooth decay and its infectious results. These are problems so vast and complex that the only hope for their solution rests on the broadest possible approach involving many areas of basic and clinical research. We need the requested building, in part, for this problem.

4. The so-called gum diseases are essentially complete mysteries, as far as their causes and prevention are concerned. Given a long enough life, everyone succumbs to some type of gum disease, accounting for the loss of 75 percent of all teeth. As in tooth decay, there are vitally important relationships between these diseases and general health. We need the requested building, in part, for the study of these problems.

5. There are the geriatric dental problems, that is problems of the aged—an ever-growing challenge now reaching tremendous proportions in both our civilian and military veteran population. We need the requested building, in part, for these problems.

6. There are the virus infections with known effects on dental health—an essentially untouched problem. We need the requested building, in part, for these problems.

7. We should find the answer to the mystery of why 9 percent of all cancers occur in the mouth and related to the dental structure. We need the requesting building, in part, for these problems.

8. The relationship of dental infections to heart disease should be studied to the end that these ailments might be wiped out. Definite relationships between rheumatic heart disease and subacute bacterial endocarditis and dental infections are known to exist. To solve these problems is one of our greatest challenges. We need the requested building, in part, for these problems.

We may continue at great length on these and other dental problems.

A word or two might be voiced on the relationship of the NIDR grant program and research in non-Federal institutions to the NIDR intramural program. They are not in conflict or in competition.

They are both needed to complement and supplement each other, in the research assault that should be made upon these tremendous afflictions.

Senator PURTELL. Doctor, do you feel the necessary staff will be available for these expanded programs?

Dr. LYONS. That personnel can be developed very quickly, given the proper facilities and adequate financial support.

Senator PURTELL. May I ask: Would that not have to be at the dental school level?

Dr. LYONS. No, sir.

Senator PURTELL. Would you inform me as to where it would be done? I am not opposed to this bill. I am most anxious to be helpful.

Dr. LYONS. It is true the dental schools can develop research centers without outside help. But I question that in the foreseeable future any dental school will be able to develop a research center of the magnitude necessary to solve these big problems.

Let me cite you an example of how useful a National Institute of Dental Research Center can be. Let's take electron microscopy, a very expensive type of equipment. It is beyond the reach of individual dental schools to set up laboratories in electron microscopy. Granted that 2 or 3 schools might set up such programs, there is the question of where their technicians might be trained in the use of such techniques.

We now have such a laboratory in the National Institute of Dental Research. They have volunteered to be helpful to any school that might be fortunate enough to get the $30,000 for the equipment. Here is an example of where a piece of equipment and a laboratory existing in the National Center can be helpful to schools trying to carry on research in this area, requiring this equipment. By having it here in the National Center we avoid duplication in the 43 schools in the 7 research centers.

Senator PURTELL. My reason for asking: Of course the testimony here—I certainly would not want it misleading and I know you wouldn't, either—might convey that we are not doing this research work here now.

Actually what you are asking for is a physical building?

Dr. LYONS. More than that.

Senator PURTELL. I am coming to that. Now you have to expand your staff?

Dr. LYONS. That is correct, but at this time the great need is for space to increase the staff of technical assistants to the highly trained research scientists.

Senator PURTELL. Now we have at the same time pending before us a bill which will authorize $40 million over a 5-year period for development of teachers for research and teaching. I wonder if we are not imposing perhaps an almost impossible task in obtaining these necessary staffs for these increased activities unless we start first the development of these men at the school level.

Dr. LYONS. I believe they can be developed simultaneously.

Senator PURTELL. I see.

Dr. LYONS. A few suggestions have been made that the NIDR intramural program is now already quite extensive, even though not housed in a central agency.

As fine as this program is, I think it is quite important to note that of all the dental research reports to the International Association of Dental Research in the past 7 years, only 60 out of 1,040 have come from the National Institute of Dental Research. That figures out approximately 6 percent. I repeat that as fine as it is, as magnificent as their personnel is, as hard as they work, they are still making an extremely limited contribution to the sum total of dental research. The schools and private dental research organizations, as handicapped as they are, are still turning out 94 percent—or they did turn out 94 percent of the research reports presented to the International Association of Dental Research in the past 7 years. Thus, the ratio of dental research outside NIDR to dental research inside NIDR is 15 to 2.

There is great fear that the National Institute of Dental Research may overgrow certain reasonable limits. It hasn't begun to crawl yet using the vernacular.

Senator PURTELL. Let me say I have not heard such feelings expressed. I would like to make it clear I am far from being opposed to this bill. I agree we have a problem in trying to solve it. I am trying to find out if you know the way it can be best and most quickly done.

Dr. LYONS. By coordinating and supplementing efforts and complementing each other in these areas.

Chairman HILL. One thought that occurs to me, Doctor, is that had we gone ahead at the time we authorized the construction of this building, we could have built a building for $2 million. Now we didn't go ahead. We had the same experience with this building that we had with our new Senate Office Building. The cost has gone up so that instead of getting it for $2 million we now have to have 5.

Dr. LYONS. Yes. And if you wait 5 more years, we will be back asking for $10 million.

Senator PURTELL. I am chairman of that committee and I think the Senator was referring to that with a degree of humor.

We have had a 23-percent increase over the building costs in 1948, if I remember correctly. They do increase. I don't think they will ever be cheaper—let me put it that way.

Dr. LYONS. That is the least important consideration. The fact is that we have lost 6 years during which time somebody could have been making very important, urgently needed contributions to the solutions of these tremendously important problems.

Senator PURTELL. One thing, may I remark: At the time that the proposed dental research building action was taken in 1948, there was at that time no pending legislation for $40 million for the expansion of teaching facilities and research facilities at dental colleges. I mean, you have had a problem. One solution was offered, a part of a solution was offered for the building of this institution. At that time, however, you did not have pending also before the committee a proposal in which 40 millions was involved, that is, the expansion of dental schools for teaching and research in those fields.

Dr. LYONS. The American Dental Association is supporting not only this bill——

Senator PURTELL. Yes, I know.

Dr. LYONS. But also the request for over $3½ million for extramural research grants. We want the total program inaugurated, and we feel that only by these means can the population of the United States get what we think they need and deserve.

May I continue?

Chairman HILL. Certainly. Go right ahead.

Dr. LYONS. The direct research program of the National Institute of Dental Research:

The search for the solutions to these problems cannot be properly intensified without the participation and support of the Federal Government.

There are 43 dental schools and about 7 non-Federal research centers presently conducting investigations of dental diseases. They receive little from endowments and have practically no access to the vast sums of money made available for research by the pharmaceutical industry. Federal support for dental research in the dental schools amounted to only $10,000 per school in fiscal year 1956.

The association has urged Congress to increase from $800,000 to $3,855,000 the proposed fiscal 1957 expenditure for the grant program administered by the National Institute of Dental Research. That increase is vitally needed to support the many research projects which the dental schools have planned but cannot initiate because of lack of funds.

The dental schools and the seven other dental research centers have the facilities and personnel to conduct the expanded research program envisioned within the association's recommendations. All of those institutions, moreover, plan to increase their capacity for research. But they will not, in the foreseeable future, be able to carry out all the investigations needed to conduct a realistic search for methods of controlling and preventing dental disease.

Many types of investigations in the areas in need of expanded research require expensive facilities and equipment that cannot ordinarily be provided by non-Federal research centers such as the dental schools. The direct research program of the National Institute of Dental Research was created to carry on such investigations. It is essential that the Dental Institute be provided with the space, facilities, and equipment necessary to launch its contribution to the dental research program that this Nation deserves.

The dental diseases are so complex in their causation that successful research on these problems requires the combined and coordinated knowledge and skills of many scientists of varied education and training: dentists, anatomists, histologists, histochemists, biochemists, physiologists, bacteriologists, nutritionists, pathologists, pharmacologists, physicists, roentgenologists, physicians, statisticians, and others. Only in an adequately housed, equipped, and staffed National Institute of Dental Research can all of these workers and their efforts be coordinated in an effective assault on major dental problems.

It seems to me that our Federal Government should respond to the urgent appeals of the dental profession to support and engage in research which may lead to the "preventive solution" of diseases afflicting our entire population. This is within the purview of "public health." A magnificent contribution which may be cited as an example of what may be accomplished at this level is public water fluoridation as an anticaries measure. As you may know, the Kingston-Newburgh experiment has demonstrated a 58-percent reduction in tooth decay in children 6 to 9 years of age at a per capita cost in the range of 8 to 12 cents. An economist could wax quite eloquent on that point.

The "preventive solution" of the dental diseases being currently beyond the attainable scope of non-Federal agencies, I, representing the American Dental Association, urge that our Federal Government engage in major dental research endeavors of the magnitude necessary to solve the enormous dental problems.

To this end, I urge that the Federal Government construct, at the earliest possible date, an adequate building, equipped and staffed for these purposes.

An adequate centralized facility and the suggested broad research program would have a salutary effect on our dental schools. Here would be a fountain head for information, coordination of research findings and guidance of researchers in our dental schools, leading to their greater productivity. Persons engaged in all varieties of dental research could receive training in such a center in the use of special equipment and techniques. Highly trained research personnel could come to such a center under the visting scientists' program. Expensive equipment housed in an adequate center would spare our dental schools the necessity of duplicating such installations, thus permitting them to use their own resources more effectively.

Not to be minimized, even though intangible, is the effect that such a center for dental research would have on the attitudes of practicing dentists, dental teachers and dental researchers. Many feel that our Federal Government is not now supporting dental research to the degree which the dental problems merit. More than this, there is reason to believe that more support at the national level would arouse the interests of persons and foundations in dental research and its importance to human welfare, to the point of adding their own contributions to its further support.

(The following letter was later received for the record:)

AMERICAN DENTAL ASSOCIATION,
Washington 6, D. C., March 6, 1956.

Hon. LISTER HILL,
Chairman, Subcommittee on Health,
Committee on Labor and Public Welfare,
United States Senate, Washington 25, D. C.

DEAR SENATOR HILL: The Department of Health, Education, and Welfare contends that the construction of a building for the National Institute of Dental Research, as proposed by S. 3246, "might actually serve to draw research manpower away from the dental schools." The Department's apprehension concerning an imbalance between the National Institute of Dental Research activities and dental research in non-Federal institutions should be completely relieved by the following facts brought out in the testimony of the American Dental Association:

1. The immediate need at the National Institute of Dental Research is to have sufficient space and facilities for its present staff of research personnel and for vitally needed additions to the staff of technicians and assistants for the Institute's principal investigators. At present, the ratio of technicians and assistants to principal investigators at the Dental Institute is less than 1 to 1. That ratio should be at least 2 technicians or assistants to 1 principal investigator.

2. With the planned dental institute building and an adequate staff of technicians and assistants, the present staff of principal investigators at the National Institute of Dental Research could greatly enlarge the research program and could certainly conduct their investigations in a more efficient manner. With moderate increases in the staff of principal investigators, in accordance with desirable planning, the National Institute could then begin to carry out the research program intended by Congress when it created the National Institute of Dental Research in 1948.

3. A survey conducted by the association's council on dental research, revealed that of all the research papers on dental subjects reported at the annual meetings of the International Association for Dental Research for the years 1950–56 in-

clusive, only 6 percent was contributed by the National Institute of Dental Research; the other 94 percent came from institutions other than the National Institute of Dental Research. That means that institutions other than the National Institute of Dental Research are contributing 15 times as much toward dental research in terms of reported projects as does the National Institute of Dental Research. On the other hand, in the field of medical research, institutions other than those at the National Institutes of Health, contribute only eight times as much medical research as do the National Institutes of Health, according to the Department's testimony on S. 3246.

4. The support of non-Federal dental research by the National Institute of Dental Research has been very limited; in terms of dollars for fiscal 1956, it is only $421,000. The modest increase to $800,000 for fiscal 1957 proposed by the Department is not nearly sufficient to launch projects already planned by the 43 dental schools and the 7 other major dental research centers. The American Dental Association has urged that the National Institute of Dental Research increase its support of research at non-Federal institutions to $3,855,000 during fiscal 1957.

In my capacity as dean of the School of Dentistry at the Medical College of Virginia, I have been in extremely close touch with the research program at my own school. I am also familiar with the research efforts at many other dental schools. None of the dental schools, in my experience, has ever attributed a reduction in its research program to shifting of research personnel from the school to the National Institute of Dental Research. On the contrary, the National Institute of Dental Research program has greatly stimulated the schools to advance the training of research personnel and has induced many dental students to enter the research field as a career. That stimulation and inducement, however, must be greatly intensified in order to meet the tremendous dental research needs. The construction of the dental institute building will immeasurably enhance the attractiveness of a career in dental research not only among dental students but also among other students with training in the biological sciences.

I would greatly appreciate having this letter inserted in the record following my testimony on S. 3246. Again, I wish to thank you and the committee for your interest in this important matter.

Sincerely yours,

HARRY LYONS, D. D. S.
President-elect, American Dental Association

Mr. Chairman, I shall now ask Dr. Doty to discuss in greater detail the difficulties faced by the personnel at the National Institute of Dental Research because of the limited space and facilities presently available to them.

Chairman HILL. Doctor, the Chair and the committee have no disposition to cut you off in any way. We want you to have the full time.

We will have to go to a joint session in the House shortly. Do you want to summarize it or read the whole statement, or what? I don't want to cut you off.

Dr. DOTY. I would like, if possible, to select certain sections and to enter the complete statement in the record, if I may.

Chairman HILL. Fine.

STATEMENT OF DR. J. ROY DOTY, SECRETARY, COUNCIL ON DENTAL THERAPEUTICS, AMERICAN DENTAL ASSOCIATION

Dr. DOTY. Mr. Chairman and members of the committee, I am Dr. J. Roy Doty, of Chicago, Ill. I am secretary of the American Dental Association's Council on Dental Therapeutics. I shall devote my comments on S. 3246 primarily to the critical need for additional space and facilities for the permanent staff of scientists at the National Institute of Dental Research.

In the next paragraph I think you can see the reasons why the American Dental Association and its various agencies has extremely

close contact with the National Institute for Dental Research, and that it can be anticipated that the association understands clearly the problems facing the Institute.

Turning to page 2: Through this close contact with the Institute, the association has firsthand knowledge of the physical facilities needed by the Dental Institute. My own evaluation of the physical facilities needed for effective research is based upon experience gained while engaged as a biochemist at the University of Illinois and while an assistant professor of physiology at the Louisiana State University School of Medicine, and more recently as a member of the National Advisory Dental Research Council.

The National Institute of Dental Research long ago outgrew the space assigned to it. Its facilities are scattered through several buildings; shifting of men from one laboratory to another has occurred frequently to reclaim space temporarily assigned to the dental scientists. But most importantly, there is extreme difficulty in achieving an efficient coordination of the total dental research effort of the Dental Institute.

The Dental Institute Building, as planned, would contain about 35,000 square feet, net, of working space. The present facilities for the dental research activities provide less than 10,000 square feet. Some of the dental schools have more working space for dental research than is assigned to the National Institute of Dental Research with its much larger scientific staff. New York University and the University of Minnesota are good examples. The former has 15,000 square feet of its facilities available for dental research; the latter has 13,000 square feet.

Officials of the Public Health Service indicated in testimony on the fiscal 1950 and 1951 budgets that the Clinical Center and other planned construction could not provide sufficient space for the Dental Institute. That prediction is now a fact. The space and facilities occupied by the permanent staff of scientists at the National Institute of Dental Research are now inadequate.

I think the next paragraph is important, because of the implication that the National Institute is somehow so large, that it is a Federal colossus.

There are 34 full-time principal investigators at the National Institute of Dental Research.

Within a month or so the majority of the scientific staff will be moved to building 2 at the National Institutes of Health.

Now that was indicated earlier.

There will be available to them at their next location approximately 125 square feet of floor space for each investigator and technical assistant. It should be noted, however, that the President's budget for fiscal 1957 proposes about 10 percent increase in direct operations of the Dental Institute. It is obvious that additional space must be made available, or the added personnel must be crowded into still more cramped quarters. The move to building 2 will, furthermore, actually reduce somewhat the space for animal facilities.

The association has been informed that the minimal standard allowance for the National Institutes of Health is 150 square feet of space for each principal investigator. Actually, in most of the Institute buildings an average laboratory contains 218 square feet of floor space. In the new Clinical Center the typical module has 225 square feet.

There is a further factor of critical need for increased space.

And I would like to emphasize this again, to indicate that the projected enlargement of the Institute is not so much an increase in the number of highly trained personnel who must be drafted from another source, but the critical need at this moment is for supporting personnel for the principal investigators.

At this time the ratio of supporting laboratory personnel to scientific investigators is less than 1 to 1, in other words, a principal investigator does not always even have 1 technician available to him.

Most efficient use of the highly trained research staff will require an increase to provide two or more technicians or assistants for each principal investigator. This is simply impossible under presently proposed space allocation but could be realized within the next 3 to 5 years, if the proposed authorization and funds for the Dental Institute Building are provided at this session of Congress.

At present there is no area available to the dental scientists for a library or conference room where literature pertaining to dental research may be stored for convenient access to the dental staff. The scientific laboratories of the Dental Institute are scattered over an area corresponding to several city blocks.

Investigators working on separate phases of a problem do not have an opportunity to check with each other as often as they should.

This situation is especially regrettable for those in basic research disciplines who are attempting to collaborate with the clinical personnel. Members of the microbiology group, for example, are scattered in four separate buildings. It is virtually impossible to expect them to pool their efforts on clinical material.

The National Institute of Dental Research has a mandate from Congress to conduct investigations in two areas—basic research and clinical research. Unless plans are executed now for constructing adequate facilities for the Dental Institute, its basic research program cannot attain the effectiveness envisioned by the Congress. There would be a correspondinlgy lower effectiveness of the clinical research activities which must of necessity be correlated closely with fundamental research areas.

As Dr. Lyons has already informed this committee, the American Dental Association emphatically supports an immediately enlarged grants program to increase dental research in dental schools and other non-Federal institutions.

The association also unreservedly supports the longer range program of providing adequate physical facilities for more efficient operation of the National Institute of Dental Research and for moderate increase of its personnel over a period of time.

Even the immediate authorization and appropriation of funds for the Dental Institute Building will not provide immediate facilities because of an anticipated time requirement of 3 or 4 years for construction. There is great urgency, therefore, to avoid any further delay.

The American Dental Association urges this committee to recommend approval of S. 3246.

In behalf of the American Dental Association, I wish to thank the committee for its indulgence. I should like also to express the appreciation of the American Dental Association to Senator Murray, Senator Hill, and the other eight Senators who joined in the introduction of S. 3246.

(Dr. Doty's complete statement and a letter subsequently submitted follow.)

STATEMENT OF THE AMERICAN DENTAL ASSOCIATION ON S. 3246, 84TH CONGRESS, A BILL TO INCREASE THE AMOUNT AUTHORIZED FOR THE ERECTION OF ADEQUATE FACILITIES FOR THE USE OF THE NATIONAL INSTITUTE OF DENTAL RESEARCH

Mr. Chairman and members of the committee, I am Dr. J. Roy Doty of Chicago, Ill. I am secretary of the American Dental Association's Council on Dental Therapeutics. I shall devote my comments on S. 3246 primarily to the critical need for additional space and facilities for the permanent staff of scientists at the National Institute of Dental Research.

The information contained in this statement has been developed by members of association councils or by persons employed by the association who have had close, in some cases, direct affiliation with the National Institute of Dental Research. The association has for many years supported fellowships at the Dental Institute. There are presently four employees of the association who are performing scientific investigations on a full-time basis at the National Institute of Dental Research. (I might emphasize at this point that the association has plans for increasing its support of research fellowships at the Dental Institute; the inadequacy of space and facilities, however, has prevented any expansion of that program.)

The secretary of the association's Council on Dental Research, Dr. H. Trendley Dean, was formerly Director of the National Institute of Dental Research.

The chairman of the association's Council on Dental Research, Dr. Thomas J. Hill, has served as an Acting Assistant Director of the Institute.

Dr. Harold Hillenbrand, secretary of the American Dental Association, has served as a member of the National Advisory Dental Research Council.

Through this close contact with the Institute, the association has firsthand knowledge of the physical facilities needed by the Dental Institute. My own evaluation of the facilities required for effective research is based upon my experience as a biochemist at the University of Illinois and as an assistant professor of physiology at the Louisiana State University School of Medicine, and more recently as a member of the National Advisory Dental Research Council.

The National Institute of Dental Research long ago outgrew the space assigned to it. Its facilities are scattered through several buildings; shifting of men from one laboratory to another has occurred frequently to reclaim space temporarily assigned to the dental scientists. But most importantly, there is extreme difficulty in achieving an efficient coordination of the total dental research effort of the Dental Institute.

The Dental Institute Building, as planned, would contain about 35,000 square feet (net) of working space. The present facilities for the dental research activities provide less than 10,000 square feet. Some of the dental schools have more working space for dental research than is assigned to the National Institute of Dental Research with its much larger scientific staff. New York University and the University of Minnesota are good examples. The former has 15,000 square feet of its facilities available for dental research; the latter has 13,000 square feet.

Officials of the Public Health Service indicated in testimony on the fiscal 1950 and 1951 budgets that the Clinical Center and other planned construction could not provide sufficient space for the Dental Institute. That prediction is now a fact. The space and facilities occupied by the permanent staff of scientists at the National Institute of Dental Research are now inadequate, and severely limit plans for expanding the Dental Institute's direct research program, particularly in the vitally important field of basic research.

There are 34 full-time "principal investigators" at the National Institute of Dental Research. Within a month or so the majority of the scientific staff will be moved to building 2 at the National Institutes of Health. There will be available to them at their next location approximately 125 square feet of floor space for each investigator and technical assistant. It should be noted, however, that the President's budget for fiscal 1957 proposes about 10 percent increase in direct operations of the Dental Institute. It is obvious that additional space must be made available, or the added personnel must be crowded into still more cramped quarters. The move to building 2 will, furthermore, actually reduce somewhat the space for animal facilities.

The association has been informed that the minimal standard allowance for the National Institutes of Health is 150 square feet of space for each principal in-

vestigator. Actually, in most of the Institute buildings an average laboratory contains 218 square feet of floor space. In the new clinical center the typical module has 225 square feet.

There is a further factor of critical need for increased space. At this time the ratio of supporting laboratory personnel to scientific investigators is less than 1 to 1. Most efficient use of the highly trained research staff will require an increase to provide two or more technicians or assistants for each principal investigator. This is simply impossible under presently proposed space allocation but could be realized within the next 3 to 5 years, if the proposed authorization and funds for the Dental Institute building are provided at this session of Congress.

At present, there is no area available to the dental scientists for a library or conference room where literature pertaining to dental research may be stored for convenient access to the dental staff. The scientific laboratories of the Dental Institute are scattered over an area corresponding to several city blocks. Investigators working on separate phases of a problem do not have an opportunity to check with each other as often as they should. This situation is especially regrettable for those in basic research disciplines who are attempting to collaborate with the clinical personnel. Members of the microbiology group, for example, are scattered in four separate buildings. It is virtually impossible to expect them to pool their efforts on clinical material.

The National Institute of Dental Research has a mandate from Congress to conduct investigations in two areas—basic research and clinical research. Unless plans are executed now for constructing adequate facilities for the Dental Institute, its basic research program cannot attain the effectiveness envisioned by the Congress. There would be a correspondingly lower effectiveness of the clinical research activities which must of necessity be correlated closely with the fundamental research areas.

As Dr. Lyons has already informed this committee, the American Dental Association emphatically supports an immediately enlarged grants program to increase dental research in dental schools and other non-Federal institutions. The association also unreservedly supports the longer range program of providing adequate physical facilities for more efficient operation of the National Institute of Dental Research and for moderate increase in its personnel over a period of time. Even the immediate authorization and appropriation of funds for the Dental Institute Building will not provide immediate facilities because of an anticipated time requirement of 3 or 4 years for construction. There is great urgency, therefore, to avoid any further delay.

The American Dental Association urges this committee to recommend approval of S. 3246.

In behalf of the American Dental Association I wish to thank the committee for the opportunity of presenting the association's position on this vitally needed legislation, and to express the association's deep appreciation to Senators Murray and Hill, and the other eight members of the Committee on Labor and Public Welfare who cosponsored S. 3246.

AMERICAN DENTAL ASSOCIATION,
Washington 6, D. C., March 6, 1956.

Hon. LISTER HILL,
Chairman, Subcommittee on Health,
Committee on Labor and Public Welfare,
United States Senate, Washington 25, D. C.

Dear Senator HILL: One of the representatives of the Department of Health, Education, and Welfare, in testifying on S. 3246, informed the committee that the National Institute of Dental Research has presently 16,698 square feet of floor space available. That figure, however, is in terms of total space.

In December of 1955, the Secretary of the Department of Health, Education, and Welfare, discussed the space and facilities problem at the National Institute of Dental Research in a letter to Dr. Harold Hillenbrand, secretary of the American Dental Association. The Department Secretary stated that the National Institutes of Health, for planning purposes, "uses a 'standard' ratio of 150 square feet (net) of laboratory space per research worker. This figure excludes administrative offices, storage, special apparatus rooms and other areas which, although essential to research, cannot be allocated on a laboratory worker ratio."

According to the Department, the Dental Institute will, in fiscal 1957, have about 125 square feet for each member of the research staff. There are 34 principal investigators and 31 technicians engaged in the Institute's research program. Thus, about 8,200 square feet will be available for research purposes. It should also be kept in mind that the 1957 budget provides for an increase of about 10

percent in National Institute of Dental Research activities. The additional personnel will have to be crowded into space which already is below the Department's standard of 150 square feet for each research worker.

I request that this letter be inserted in the record following my testimony on S. 3246.

I wish to thank the committee for the privilege of expressing the American Dental Association's views on S. 3246.

Sincerely yours,

J. Roy Doty,
Secretary, Council on Dental Therapeutics, American Dental Association.

Chairman Hill. Thank you, Doctor. We certainly appreciate your statement, and Dr. Camalier's statement and Dr. Lyons' statement.

Dr. Lyons. Senator, may I add one word in support of Dr. Doty's statement with reference to personnel? That will answer your question. I can do it quickest by citing an example.

Chairman Hill. Go ahead.

Dr. Lyons. We have one individual in our school who serves as director of dental research. He has a baccalaureate, a medical, a Ph. D. in pathology and a dental degree.

We now have seven technicians working for him. If we had the space and the means, he could employ and keep busy in research 15 technicians who could be trained in very short order.

It isn't a problem so much of getting chief investigators trained. There are a lot of capable research workers now. They need space; they need facilities; they need equipment; they need technical help that can be trained very quickly. And they need the benefit of coordinated efforts from all sides.

Senator Purtell. May I ask: You feel this will in no way reduce the interest in expanded programs proposed for dental schools both in dental research and teaching.

Dr. Lyons. On the contrary, I think it will encourage it.

Senator Purtell. Again, I'll emphasize, that I am in no way opposed to it—I want to see your research done. I simply want to find out in what area that is best to do it first with limited personnel. The great problem we have had here in committee for many years, in running into this type of legislation, is the question of where we will get trained personnel to do the job.

The chairman will agree we explored that last year in mental health and other fields. The thing we are confronted with is a need for expanded facilities so that more men can be trained in these fields. That is the reason for questioning you.

Dr. Doty. May I add a word?

Chairman Hill. Yes.

Dr. Doty. I would like to say it is the opinion of the American Dental Association, as well as the opinion voiced here by the deans of the dental schools, that the American Dental Association is more familiar with the availability of trained personnel in the field of dental research than are persons familiar only with medical research.

The American Dental Association does not share the apprehension expressed here earlier that adequately trained research personnel are not available.

Chairman Hill. Doctor, one point that you made in your very excellent statement—I well understand why Senator Robertson said you had such a fine school there, after hearing you testify here this morning.

Dr. Lyons. Thank you, sir.

Chairman Hill. Would this building give a dignity and recognition to the dental profession and to dental research and do much to challenge public interest?

As you know, we just concluded what we call Heart Week. You heard and saw much about that on radio and television and in other ways.

I think about $5 for heart research comes from private gifts, in comparison with $1 from Government appropriations.

I think that this building would do much to challenge the public's interest in dentistry and more particularly into dental research.

It might be it will bring us many millions of dollars of research we are not getting today; isn't that true?

Dr. Lyons. I would support that opinion fully and completely, every word. Not only is it true of the United States, Senator Hill, but it would be true throughout the world. People are best approached symbolically, and this would be a symbol that would indicate the magnitude, the importance, the need for dental research in the solution of health measures.

I think that point should be emphasized at great length. I think you would essentially be planting a seedbed that would be very fruitful. You see, dental research right now has practically no public support. Very little endowment.

Chairman Hill. Well, it certainly has not been brought to the attention of the public in any kind of dramatic way at all; no way that would challenge them, so to speak.

Dr. Lyons. We dentists might be partly at fault, but we have not had the means of reaching the public, and we need that approach, and this would be one avenue in that direction.

Senator Purtell. Of course, I think we will. I am sure the chairman will agree with me, that we are certainly indicating a greater awareness of this need as a result of this proposed legislation, and I mentioned it before, in which $40 million will be given for additional schools and for research.

I agree with you, attention should be centered on this problem. If this is one way of doing it, certainly it would be money well spent.

Chairman Hill. I am advised that Dr. Volker has to catch a plane in a few minutes, and if it is agreeable, we will hear from Dr. Volker at this time, then.

Dr. Joseph Volker, dean of the Alabama School of Dentistry; we welcome you.

STATEMENT OF DR. JOSEPH VOLKER, DEAN OF THE ALABAMA SCHOOL OF DENTISTRY

Dr. Volker. I would like to speak to this point very rapidly.

In addition to being dean of the Alabama School of Dentistry, I am director of research of our entire medical center and I think I know full well the relationship of dental to medical research and I see no conflict with this general approach to things. As far as I am concerned I think my attitude about the relationship of dental to medical research is quite in conflict with some of the opinions I heard expressed at the outset of these hearings.

Now, first, speaking for research, the research setup within the Institute, I would say this bill would have absolutely no effect on our present standing research center, that it would not take any of our research workers, either present or potential, out of the State of Alabama.

I think we can say that we have provided in our State more adequate dental facilities than the Federal Government has.

This reminds me of a very simple situation in which dentistry is the little brother who has always had the hand-me-down suits; occasionally a new suit is mandatory, and this is definitely one of the occasions.

I would like to generalize as it affects my home county. Dr. Lyons in passing referred to the geriatric problem. In Jefferson County, the largest county in the State of Alabama, in the last 20 years our population has increased 20 percent. But there has been 185 percent increase in those individuals over 65 years of age.

And so we could take any one part of Dr. Lyons' very adequate testimony and build a case for this Institute. It is long overdue.

Chairman HILL. You have, too, in Jefferson County now, a fine veterans' hospital. And of course you have seen there the tremendous cost for dental care to the veterans.

Dr. VOLKER. Yes, sir. Thank you very much for this opportunity.

Chairman HILL. Well, Doctor, I can bear witness to what a fine school we have. Your testimony here today more than confirms all of my faith and belief in your school down there.

Dr. VOLKER. But I would say we have a fine dental school and fine research center, because we have space and we have money. And give anyone space and money and they will get the personnel and they will settle the problem, Mr. Chairman.

Chairman HILL. Thank you, Doctor. It was very nice to have had you here.

Senator MURRAY?

Senator MURRAY. Mr. Chairman, I would like to have introduced in the record at this point a resolution adopted by the Cleveland Dental Society, which concisely cites the case for an increased appropriation for dental research.

Chairman HILL. It will go in the record at this point, the resolution of the dental society.

(The resolution referred to is as follows:)

Whereas the physical, social, and economic toll taken by dental disease is constantly increasing and affecting most of the Nation's population, child and adult; and

Whereas great advances in preventing disease come as a result of research, and millions of people have already been benefited by dental research; and

Whereas the American dental bill which amounts to nearly a billion and a half dollars per year may be reduced by a few million dollars spent for research; and

Whereas the American dental bill is approximately 16 percent of the total medical bill while only 1.3 percent [1] of the funds allocated for research is devoted to dental disease; and

Whereas 40 percent of the men entering military service required immediate dental treatment, and today our troops are losing collectively over a million teeth a year with 5 percent requiring replacement to provide even the minimum for the chewing of food; the cost of this dental care to the taxpayer at the most con-

[1] Research grants to Institutes for research (1.3 percent of total):

Institute for Cancer Research	$6,700,000
Institute for Heart Research	6,400,000
Institute for Mental Health	2,587,000
Institute for Arthritis Research	3,152,000
Institute for Dental Research	421,000

servative civilian rates would exceed $80 million a year and even a very modest progress would pay for the dental research many times over in the reduction of governmental dental costs; and

Whereas the President of the United States in his annual message this year complimented dentists as being a part of the Nation's health team and mentioned the need for more dental research; and

Whereas the dental profession has contributed over $220,000 annually for dental research: Therefore be it

Resolved, That our representatives in Congress be urged to exert every effort to increase the appropriation for the United States Public Health Service dental activities for the 1957 fiscal year from $2,971,000 to $6,026,000, this increase to be used for the dental-research program of the National Institute of Dental Research; and be it further

Resolved, That our representatives in Congress be urged to request an appropriation of funds for the construction of the National Institute of Dental Research Building.

DWIGHT R. KINSLEY, D. D. S.,
President.

Chairman HILL. Now, Dr. Dean, we will be glad to have you, sir. You have been with us before, Dr. Dean?

STATEMENT OF DR. H. TRENDLEY DEAN, SECRETARY, COUNCIL ON DENTAL RESEARCH, AMERICAN DENTAL ASSOCIATION

Dr. DEAN. Yes, sir; and I merely want to emphasize what has been said here this morning. The interrelationship of our two proposals will further the efforts in all phases of dental research.

Chairman HILL. Anything else you would like to ask, Senator Purtell?

Senator PURTELL. No.

Chairman Hill. The doctor speaks with great authority, having been head of the Institute here.

You heard me read the quotation from Dr. Topping?

Dr. DEAN. Yes, sir.

Chairman HILL. You also heard Dr. Lyons refer to that quotation. Is there anything you would like to emphasize about what Dr. Topping said several years ago?

Dr. DEAN. From all I have learned, they are more crowded now than when Dr. Topping made that statement. The most efficient utilization of high priced scientific personnel is to provide sufficient space; they are not at their maximum effectiveness when working on top of one another.

Chairman HILL. Thank you, Doctor.

(Dr. Dean subsequently submitted the following letter for the record:)

AMERICAN DENTAL ASSOCIATION,
Washington 6, D. C., March 6, 1956.

Hon. LISTER HILL,
Chairman, Subcommittee on Health,
Committee on Labor and Public Welfare,
United States Senate, Washington 25, D. C.

DEAR SENATOR HILL: During the hearings on S. 3246 the American Dental Association witnesses emphasized the great need for additional research in connection with the horribly crippling condition called cleft palate. As pointed out in the association's testimony, cleft palate occurs in 1 out of every 800 live births.

Although much is being done today as far as improved treatment of cleft palate conditions is concerned, very little is being done to discover the causes of the condition. The association believes that the National Institute of Dental Research investigations into the causes of cleft palate should be greatly expanded. The association is also convinced that the Dental Institute should greatly expand its investigations toward improved treatment methods for cleft palate, particularly to determine the optimum time to begin reparative treatment.

The association believes that the committee's attention should be directed to the present status of research on cleft palates now being conducted at the National Institute of Dental Research. Within the last year, that research has been seriously curtailed because of the loss of two principal investigators. Although the reasons for the departure of those highly trained research scientists have not been made known, they might have remained to carryf out their vitally needed investigations at the National Institute of Dental Research had the facilities and space for their research efforts been adequate.

I wish to thank the committee for the opportunity of testifying on S. 3246 and I request that this letter be inserted in the record following my comments on S. 3246.

Sincerely yours,

H. Trendley Dean, D. D. S.,
Secretary, Council on Dental Research, American Dental Association.

Chairman Hill. Now, the Good Book tells us that "the first shall be last and the last shall be first."

Dr. Center, I think it is fine to close these hearings this morning with a fine lady from the department of public health for the State of Georgia. She has also been with us in the past and has always been most helpful.

We are delighted to have you here, Doctor.

Mrs. Center. Well, Senator Hill, I am not a doctor.

Chairman Hill. Well, I have promoted you.

Mrs. Center. I appreciate very much, the degree you have conferred upon me.

STATEMENT OF MRS. CHARLES D. CENTER, ASSISTANT DIRECTOR OF PUBLIC HEALTH EDUCATION, DEPARTMENT OF PUBLIC HEALTH, STATE OF GEORGIA

Mrs. Center. Senator Hill and members of the committee, I would like to say just a few things and then file my complete statement.

Chairman Hill. I would be glad to have you say anything you wish and then file your full statement for the record.

In that connection, if any of you gentlemen who testified here this morning have anything you did not get to say or anything further you would like to say, we would be glad to have you file it for the record.

Mrs. Center. We come again to you gentlemen who represent us in our movement to make an appeal in the interest of dentistry.

Dentistry may not have the emotional and dramatic appeal as some of the other chronic diseases—though, a large portion of our total population are dental cripples.

Our main hope for the control and prevention of dental diseases lies in research as to their underlying causes. One of the things I would like to say, is how badly we need research in dentistry, especially when we reflect upon the economics of the total problem. Expressed in economic terms, the dental problem in this country is staggering. In addition to the enormous sum spent annually by the American people for dental care, there is the serious economic burden of lost manpower.

According to a recent study, this amounts to more than 47 absentees a year per 1,000 employees.

There are also serious implications for national defense, as shown in a study made during the mobilization of troops in the Korean war.

Of 556,000 men turned down for military service, more than 17,000 were rejected because of dental disorders.

Despite the national expenditure of over $1½ billion for dental care, less than one-third of our people are receiving adequate dental service.

In view of our growing population and longer lifespan, we must face the fact that we do not have, and may never have, enough dentists to meet a fraction of this perpetual and mounting need.

The greatest research achievement in dentistry has been the control of tooth decay by fluoridation of community water supplies. As a result of extensive studies carried out by the Public Health Service during the past 15 to 17 years, over 1,100 communities throughout the United States today have fluoridation programs. This single advance points up the value of a fundamental research approach to the problem of dental disease.

The type of dental research facilities needed can be illustrated by listing—and I will not bring this to your attention at this time—may I just go on to say that in my opinion this is not an either/or proposition. I would certainly like to support what Dr. Lyons and others have said. I believe, as a layman, that research is needed both in our dental schools and in this building at the National Institute of Health which is so greatly needed. We wish to recommend to you most sincerely that you support Senate bill 3246, which will provide the necessary appropriations for an adequate building for dental research at the National Institutes of Health. I will file my written statement with the secretary.

Chairman Hill. Good.

(The statement referred to is as follows:)

Mrs. Charles D. Center, Georgia Department of Public Health, Atlanta, Ga.

1. Member, National Advisory Dental Research Council 1950–54.
2. A member, steering committee, National Health Assembly (Dental section).
3. Member, board of managers of National Congress of Parents and Teachers for 15 years and Georgia Congress of Parents and Teachers for 28 years.
4. Life member, American Social Hygiene Association.
5. Former secretary, Georgia Public Health Association.

Statement of Mrs. Mayola S. Center, Georgia Public Health Association

We come again to you gentlemen who represent us in our Government to make an appeal in the interest of dentistry.

Dentistry may not have the emotional and dramatic appeal as some of the other chronic diseases—though a large portion of our total population are dental cripples.

Our main hope for the control and prevention of dental diseases lies in research on their underlying causes. In 1950–51 the National Institute made a survey of dental health problems. It was found that the main obstacle to solving this major health problem was the lack of research facilities, particularly in research building at the National Institute of Health.

The matter was discussed in many meetings of the National Advisory Council on Dental Research during the years I served as a member (1950–54).

Expressed in economic terms, the dental problem in this country is staggering. In addition to the enormous sum spent annually by the American people for dental care, there is the serious economic burden of lost manpower. According to a recent study, this amounts to more than 47 absentees a year per 1,000 employees. There are also serious implications for national defense, as shown in a study made during the mobilization of troups in the Korean war. Of 556,000 men turned down for military service, more than 17,000 were rejected because of dental disorders.

Despite the national expenditure of over $1½ billion for dental care, less than one-third of our people are receiving adequate dental service. In view of our growing population and longer life span, we must face the fact that we do not have, and may never have, enough dentists to meet a fraction of this perpetual and mounting need.

The greatest research achievement in dentistry has been the control of tooth decay by fluoridation of community water supplies. As a result of extensive studies carried out by the Public Health Service during the past 15 to 17 years, over 1,100 communities throughout the United States today have fluoridation programs. This single advance points up the value of a fundamental research approach to the problem of dental disease.

The type of dental-research facilities needed can best be illustrated by listing the problem areas that present the best research opportunities. Malocclusion—the correct relation of the teeth or the jaws to each other (crooked teeth) is a serious problem among at least 1 out of every 10 children.

Cleft lip and palate is a congenital affliction which occurs once in every 800 live births in this country.

All available evidence indicates that the nutritional character of the diet is involved in tooth decay. Special diets have been developed by which major features of human tooth decay may be duplicated in experimental animals. The relation of commercial heat processing of food to caries production is a matter of special interest and experimentation.

Disease of the supporting structure of the teeth—periodontal disease—is the major cause of tooth loss in adults. The prevalence increases with age, so that ultimately 85 percent of our population is afflicted with this baffling condition.

Little if anything is known concerning the relation between tooth infection and other diseases such as rheumatic fever and arthritis.

All of these problems must be approached through basic research studies, for which scientific laboratories equipped with modern precision instruments and experimental animal facilities similar to those in medical research areas are essential. There is no fundamental difference at this basic research level between dental research and of other chronic and infectious diseases. The advantages to be desired are many.

I wish to recommend to you sincerely, that you support Senate bill 3246, which will provide an adequate dental research building and facilities at the National Institutes of Health.

Senator PURTELL. Now, this has been a most enlightening presentation. Some of the questions that arose in my mind you have cleared up, and I thank you for it.

Chairman HILL. We do deeply appreciate your coming all the way from Georgia to be with us this morning and give us this very helpful testimony.

Mrs. CENTER. Well, we thank you for the opportunity of being here.

Chairman HILL. Now, Doctor Camalier, do you or any of the other gentlemen have anything to add?

Dr. CAMALIER. Except to say that we appreciate very much the courtesy that has been extended and we are very hopeful that you will act affirmatively on this proposition.

Chairman HILL. Thank you very much, Doctor. We want to express to each of you our deep appreciation for the very fine, excellent testimony which you brought here this morning.

Mr. CONWAY. Mr. Chairman——

Chairman HILL. Yes, Mr. Conway.

Mr. CONWAY. I would like to ask the committee to submit any questions they may wish. Because of the restriction of time I know some questions remain unanswered. If you will submit them to our office in Chicago, we will be happy to answer them.

Chairman HILL. Thank you, Mr. Conway. If we have any, we will submit them to you.

I have already received 65 letters and wires from State and District dental societies throughout the country urging the Congress to promptly pass S. 3246. I am inserting just a few typical ones at this point in the record and then listing the States from which similar messages have already been received. Others are being heard from daily. I know of few pieces of legislation which have had such overwhelming and unanimous support from the professional group most concerned with and knowledgeable about the subject of the bill.

(The matter referred to is as follows:)

INDIANAPOLIS, IND.,
February 28, 1956.

Hon. LISTER HILL,
Senate Office Building,
Washington, D. C.:

Members of Indiana State Dental Association strongly request your support of S. 3246, the bill to increase from $2 million to $5 million funds authorized for building to house National Institute of Dental Research. Congress authorized building in 1948 but did not appropriate funds. Institute has been mandated by Congress to expand basic and clinical research in dental field, but lack of space and facilities prevents carrying out directive and makes difficult coordination of research projects. We shall appreciate your support.

DR. WILLIAM E. BARB,
President.
BRODERICK H. JOHNSON,
Executive Secretary, Indiana State Dental Association.

SKOWHEGAN, MAINE, *February 28, 1956.*

Senator LISTER HILL,
Senate Office Building,
Washington, D. C.:

Respectfully urge your support on S. 3246 which represents the policy of the Maine Dental Society. Hope you can hear testimony on Wednesday by representatives of the American Dental Association.

S. M. GOWER,
Secretary, Maine Dental Society.

NEW ORLEANS, LA., *February 29, 1956.*

Senator LISTER HILL,
Chairman, Subcommittee on Health,
Senate Committee on Labor and Public Welfare,
Washington, D. C.:

The Louisiana section of the American College of Dentists would like to ask that you give sympathetic consideration to the proposed increase in funds for dental research as related to Senate bill 3246.

ROBERT F. EASTMAN, D. D. S.,
Secretary, Louisiana Section,
American College of Dentists, Loyola Univeristy.

MANCHESTER, TENN., *February 28, 1956.*

Hon. LISTER HILL,
Senate Office Building, Washington, D. C.

Re Senate bill No. 3246 urgently request that appropriations for National Institute of Dental Research be raised from 2 million to 5 million needed to carry out adequate research.

MEMBERS OF 4TH DISTRICT DENTAL SOCIETY, COMPONENT OF TENNESSEE STATE DENTAL SOCIETY.

WASHINGTON, D. C., *March 1, 1956.*

Hon. LISTER HILL,
Chairman of Subcommittee on Health,
Senate Committee on Labor and Public Welfare,
Senate Office Building:

On behalf of the District of Columbia Dental Society your support is solicited on bill S. 3246. The society urges that funds for housing of National Institute of Dental Research be increased to $5 million. The Institute already has received a mandate from Congress to expand basic and clinical research in dental field. Lack of space and facilities prevent the Dental Institute from carrying out this directive from Congress.

Dr. JOHN F. KEAVENY,
Secretary, District of Columbia Dental Society.

Chairman HILL. Other States from which similar communications have been received are Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Georgia, Illinois, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oregon, Pennsylvania, Rhode Island, South Dakota, Vermont, Virginia, West Virginia, Wisconsin, and Puerto Rico.

(By direction of the chairman, the following is made a part of the record:)

CONSTRUCTION OF BUILDING FOR NATIONAL INSTITUTE OF DENTAL RESEARCH

Remarks of Hon. James E. Murray of Montana in the Senate of the United States, Tuesday, February 21, 1956

Mr. MURRAY. Mr. President, I introduce, for appropriate reference, a bill which has as its objective the prompt carrying out of the declared intention of the Congress to construct among the National Institutes of Health at Bethesda a building to house the National Institute of Dental Research. While I believe this legislation is quite important to the American people and to the dental profession in our country, it is nonetheless very simple and uncomplicated in its contents. It would simply increase the existing authorization for such construction from $2 million to $5 million.

The Committee on Labor and Public Welfare unanimously recommended and the Congress in passing the National Dental Research Act of 1948 approved and authorized the construction of a building to house the activities of the National Institute of Dental Research. In that legislation we authorized an appropriation of not to exceed $2 million for the construction of that building. Subsequently the Congress appropriated $100,000 which was used to develop building plans and specifications for the Dental Institute. The Korean war intervened, however, and, of necessity, the construction work had to be postponed. Subsequently, and despite the fact that plans for the building have been drawn at great cost, there has been no appropriation to begin its construction. The explanation is very simple. It lies in the fact that building costs have advanced considerably since 1948, and while the sum of $2 million was undoubtedly sufficient at that time, to construct the Dental Institute Building in accordance with the already approved plans would, it is estimated, cost more than double the amount originally estimated. Failure to initiate the construction of the Dental Institute Building at the time the Congress authorized the project has proved a most costly postponement. If this construction should be further postponed, it will be still more wasteful. More important than the monetary aspects of this situation, however, is the fact that lack of proper facilities for the Dental Institute's program poses a serious threat to this Nation's progress toward the effective control and prevention of dental disease. I would remind the Members of Congress, Mr. President, that dental disease afflicts more than 98 percent of our population in the course of their lifetimes.

I am happy to announce that Senators Allott, Bender, Douglas, Hill, Ives, Kennedy, Lehman, McNamara, and Neely have joined me in cosponsoring this worthy measure. We are in complete agreement that the amount authorized for the National Institute of Dental Research Building should be increased to $5 million. It is my conviction that the increased authorization should and will be promptly approved on a bipartisan basis and that the Congress will restate its conviction that the construction of the Institute Building be postponed no longer.

Members of the Congress will find that their State, county, and district dental societies, as well as the American Dental Association, are wholeheartedly supporting the passage of this bill. In so doing America's dentists are once again proving that they are indeed members of a great profession, that now as always in the past they regard the interests and the well-being of the American people as more important than their own immediate self-interests. This is the distinguishing mark of a true profession. For this the American people are once again indebted to America's dentists, and because of this I want to express my thanks to the members of the dental profession and to assure them that I shall do all that lies in my power to see to it that this legislation becomes law and that the National Institute of Dental Research becomes a physical reality.

Mr. President, I ask unanimous consent that the text of the bill, which is very brief, be printed in the Record at this point in my remarks.

The President pro tempore. The bill will be received and appropriately referred; and, without objection, the bill will be printed in the Record.

The bill (S. 3246) to increase the amount authorized for the erection and equipment of suitable and adequate buildings and facilities for the use of the National Institute of Dental Research, introduced by Mr. Murray (for himself and other Senators), was received, read twice by its title, referred to the Committee on Labor and Public Welfare, and ordered to be printed in the Record, as follows:

"*Be it enacted, etc.*, That section 5 of the National Dental Research Act, approved June 24, 1948 (Public Law 755, 80th Cong.), is amended by striking out '$2,000,000' and inserting in lieu thereof '$5,000,000'."

Nation's Teeth are Orphans in Research

By Jane Stafford, Science Service Medical Writer

Washington, February.—Congress is being asked to put teeth into the fight to save America's teeth. In other words, to appropriate more funds for: 1. Dental research by Government and by dental schools and other dental research centers; 2. A home for Federal dental research in the shape of a building for the National Institute of Dental Research at Bethesda, Md.

So far as research goes, our teeth are orphans. The 1957 budget proposals for the National Institutes of Health allots to the Institute of Dental Research less than $3 million of the $126,525,000 proposed for all the Institutes.

Dental diseases, however, afflict 98 percent of all persons during their lifetime, the American Dental Association points out.

The dental association itself is currently paying the salary and supporting the research of 9 scientists at the Bureau of Standards and 4 scientists at the National Institutes of Health.

The study on mottled enamel which led to the discovery of the decay-preventing effect of small quantities of fluoride in drinking water was supported by a 1916 grant from the American Dental Association to Dr. Frederick S. McKay of Colorado Springs, Colo.

The discovery that the controlled addition of a tiny amount of fluoride ions, about one part per million, to domestic water supplies would reduce the incidence of dental decay by about two-thirds is one of the most significant contributions of research of the generation the association points out.

Reducing dental decay, important as that is, makes up only part of the problem of keeping healthy teeth in our mouths. Diseases of the gums, such as pyorrhea, are taking an increasing toll of teeth at older ages. With more funds for research, a preventive for this might also be found.

The day might even come when dental disease could be reduced so that we could get dental insurance along with Blue Cross and Blue Shield insurance to pay the hospital and surgical bills.

[Editorial from St. Paul Pioneer Press, February 29, 1956]

The Need for Expanded Dental Research Program

Uncle Sam might make a profitable investment in dental research. The Government spends upward of $100 million a year repairing and treating the teeth of servicemen and veterans.

The secretary of the American Dental Association recommends that Congress provide $6 million for an expanded dental research program in 1957. Abo $3 million is being spent for this purpose in the current year. Pyorrhea, on the chief causes of loss of teeth, would be a special target in the more inte program proposed.

Dental research has not had the public and private support given many o health studies. While undramatic, tooth decay and deterioration are prob the most common physical ailments which plague Americans. Progress is b made in improving children's teeth by means of fluoridation of water supp No comparable preventive weapon to ward off adult dental troubles had developed.

Dentists believe that systematic research on a larger scale would bring answers to many problems and result in better national health. In view of t large sums spent by the Government repairing tooth damage among members of the armed services, a substantial program of research would be justified. The benefits eventually would extend to the entire population.

[Editorial in the Washington Post o fSaturday, February 18, 1956]

Uncle Sam's Dental Bill

In any movie travelog disparities in the physical fitness of peoples are strikingly revealed by the condition of their teeth. Even Americans for all their medical advance, do not score too well in such a test. Tooth decay is the most prevalent disease in this country, and less than a half a nation is receiving adequate dental care. This shows up particularly in draftees. Uncle Sam is spending $100 million a year for dental care of service men, and has spent $250 million in the last 5 years for veterans' dental repairs.

The chief means of attacking this problem, and cutting this expenditure is through dental research, according to Dr. Harold Hillenbrand of Chicago, secretary of the American Dental Association. He told the House Subcommittee on Labor, Health, Education, and Welfare that the 1957 appropriation for research grants by the National Institutes of Health ought to be increased by $3,055,000 to bring it to $6,026,000. As a result of the fluoridation of water supplies, tooth decay in children is being cut. Now a research attack needs to be made on pyorrhea, chief cause of tooth loss among adults, as well as on other dental diseases. Since dental research is wholly dependent on Federal funds—no private fund drives for it are held—it seems necessary, as well as prudent, for the Government to back it as far as possible.

(Whereupon, at 11:53 a. m., the subcommittee adjourned, subject to the call of the Chair.)

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